

Appendix C

Appendix C shows a comparison of the amino acid sequences of the SDH domains of the bifunctional LKR/SDH proteins from Arabidopsis, corn and soybean, SEQ ID NOs: 112, 122 and 121, respectively, and the yeast monofunctional glutamate-forming SDH (gi:729968). Amino acids conserved among at least one plant sequence and the yeast sequence are indicated with an asterix (*) on the top row; amino acids conserved among at least two plant sequences are indicated by a plus (+) above the alignment; dashes are used by the program to maximize the alignment of the sequences.

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SDH domain of SEQ ID NO:112 MTTKSGVLILAGGRVCPRAADEFLLASVRTSISQQWYKTYFGADSEEEKTDVHVIVASLYLKD
SDH domain of SEQ ID NO:122 GPK-----ILIGAGRVRCPRAAEFLASYPDICT----YGVDDHDADQIHVIVASLYQKD
SDH domain of SEQ ID NO:121 ---KAAVILILAGGRVCPAAEMISLSSFGRPSSQWYKTIILEDFFECQTDVWEIVGSLYQKD
GI: 729968 MGKNN-----VLLLGGSFVAPVPTLAA-----NDINVIVACRTLNL

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SDH domain of SEQ ID NO:112    SYVDDDETSMLHEKAKSAGITILGEMGLDPGIDHHMMAKMINDAHIKKGKVKSFTSYCGGL
SDH domain of SEQ ID NO:122    SYVDESMNSLSSQAADGVTILECMLDPGIDHLMSNMKIDEARHARKGIKAFTSYCGGL
SDH domain of SEQ ID NO:121    SYVDSDSMSLMLKADAGTILGEMGLDPGIDHHMMAKMINQAHVRKGKIKAFSTSYCGGL
GI: 729968                      SYLSPAIRELPEIYKAGITVNMFIIGDPGIDHLYAVKTIDDEVHRAGGKLKSFTSYCGGL

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SDH domain of SEQ ID NO:112
SDH domain of SEQ ID NO:122
SDH domain of SEQ ID NO:121
GI: 729968

SDH domain of SEQ ID NO:112
SDH domain of SEQ ID NO:122
SDH domain of SEQ ID NO:121
GT: 729968

SDH domain of SEQ ID NO:112
SDH domain of SEQ ID NO:122
SDH domain of SEQ ID NO:121
GT: 729968

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LGFNEEREVPSLKSVFSDATCYLMEEKLAYSGNEQDMVLHLLHEVEFLESKRICKHTAT
LGLHEETQIPKGCCSSPFVWICQRMEQRAYGHNEQDMVLHLLHEVEYEPDQGPAEKHQH
LGLDQTEITPASCKSFADVCPFMRMEYSTVSTEDMVLWILHEVEIYPLPSQITEKHZAT
LGI FESKATPTB-GNADLTICAPLEFLIMOVYEDFEDMUVLJQKEFTEIENDGT-TETRATST

SDH domain of SEQ ID NO:112
SDH domain of SEQ ID NO:122
SDH domain of SEQ ID NO:121
GT: 729968

SDH domain of SEQ ID NO:112
SDH domain of SEQ ID NO:122
SDH domain of SEQ ID NO:121
S1: 720060